GROUP 12

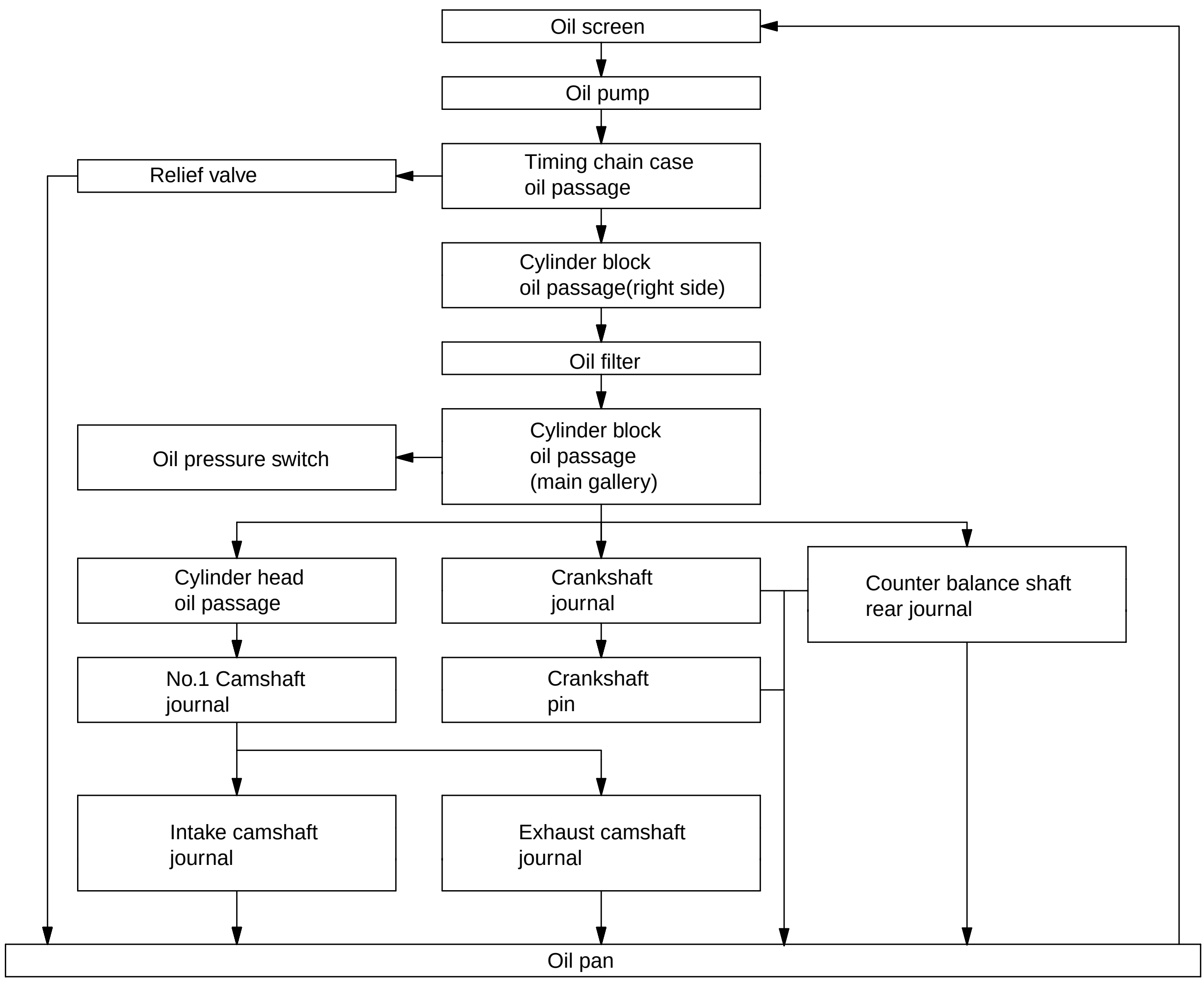
ENGINE LUBRICATION

CONTENTS

GENERAL INFORMATION

M2120000100034

LUBRICATION SYSTEM SCHEMATIC



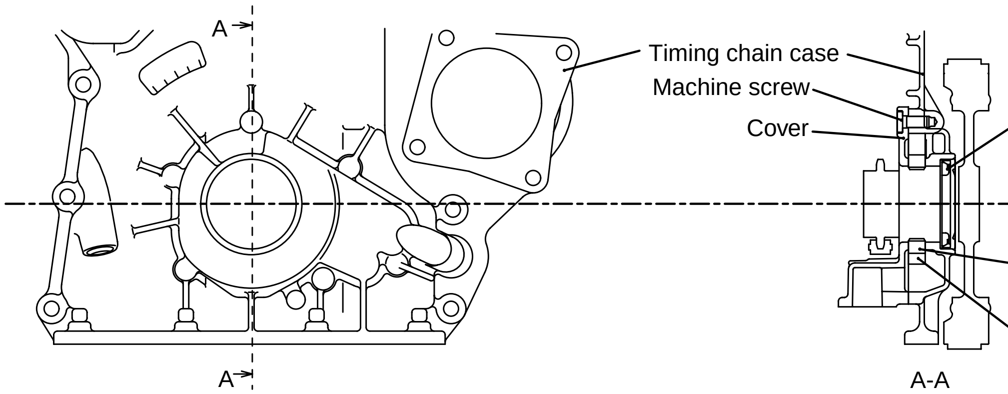
AK305366AB

The lubrication system employs a full-flow filtering and forced feeding. Oil in the oil pan is sucked by the oil pump which then sends out oil at pressure regulated by the relief valve, through the oil filter and to the cylinder block. From there, oil flow is divided into the passage to the crankshaft journals and that to the cylinder head.

From the crankshaft journals, oil flows to the crank pins. From the cylinder head, oil flows to the camshaft journals.

OIL PUMP

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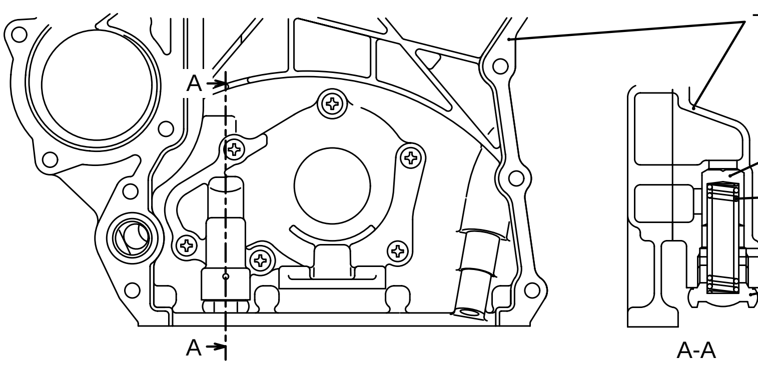


The oil pump is of a cycloid type, directly driven by the crankshaft.
On the cycloid oil pump, as the inner rotor is rotated by the crankshaft, the outer rotor also rotates. The resultant change in spatial volumes between the rotors generates pumping action.
Specifically, oil is sucked into the expanding space and is pushed out from the shrinking space.

Item		**Specification**
Type		Cycloid pump
No. of lobes	Inner rotor	10
	Outer rotor	11
Displacement L/min(6,000 r/min.)		35

RELIEF VALVE

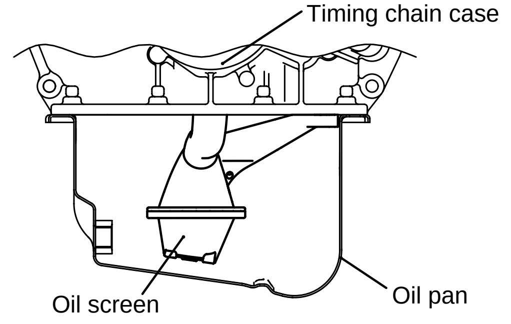
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The relief valve is of a plunger type. The valve regulates the maximum pressure of lubrication oil being sent to the engine.
When the pressure of oil from the oil pump exceeds the specified value, the valve opens to relieve the excess flow.
The excess oil is returned to the suction side of the oil pump.

OIL SCREEN

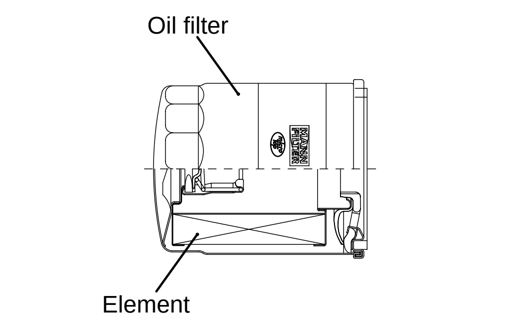
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The oil screen is located in the position with the least disturbance to the oil suction volume that results from oil level variation in the oil pan while the vehicle is driven.

OIL FILTER

M2120005000010

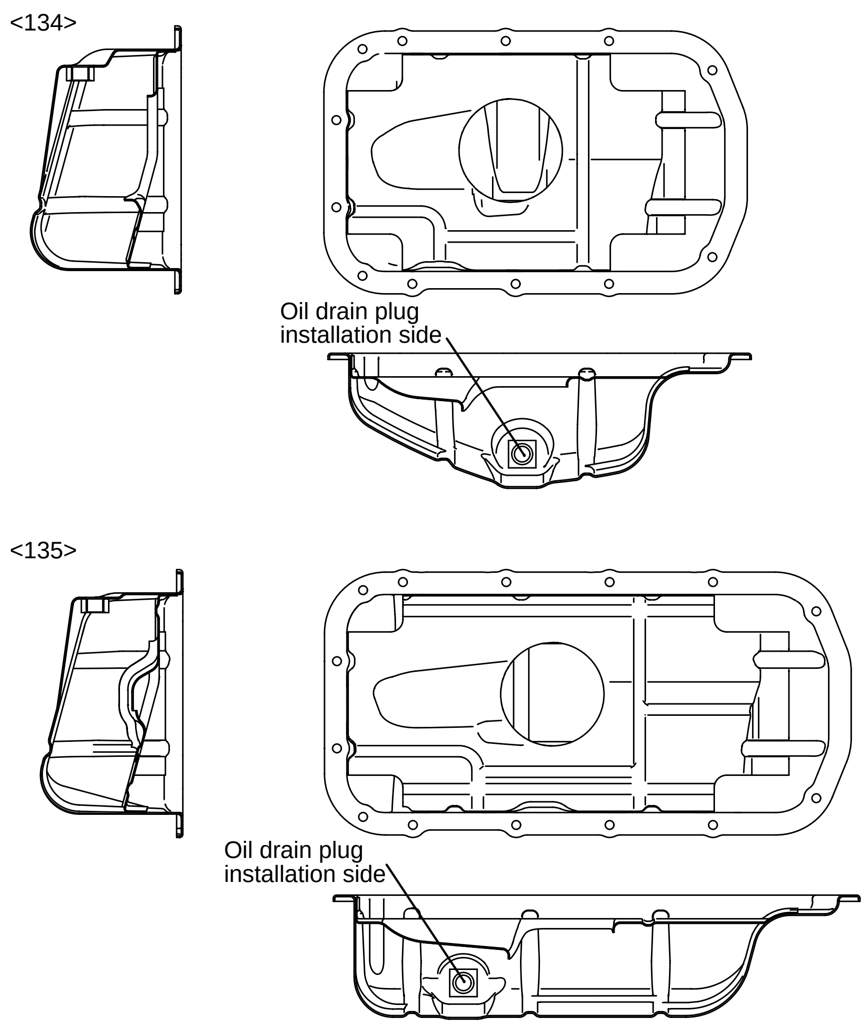


The oil filter is mounted onto the cylinder block.

Item	Specification
Filtering method	Full-flow filtering, Paper element
Filtration area cm^2	750
Rated flow L/min.	25

OIL PAN

M2120006000013

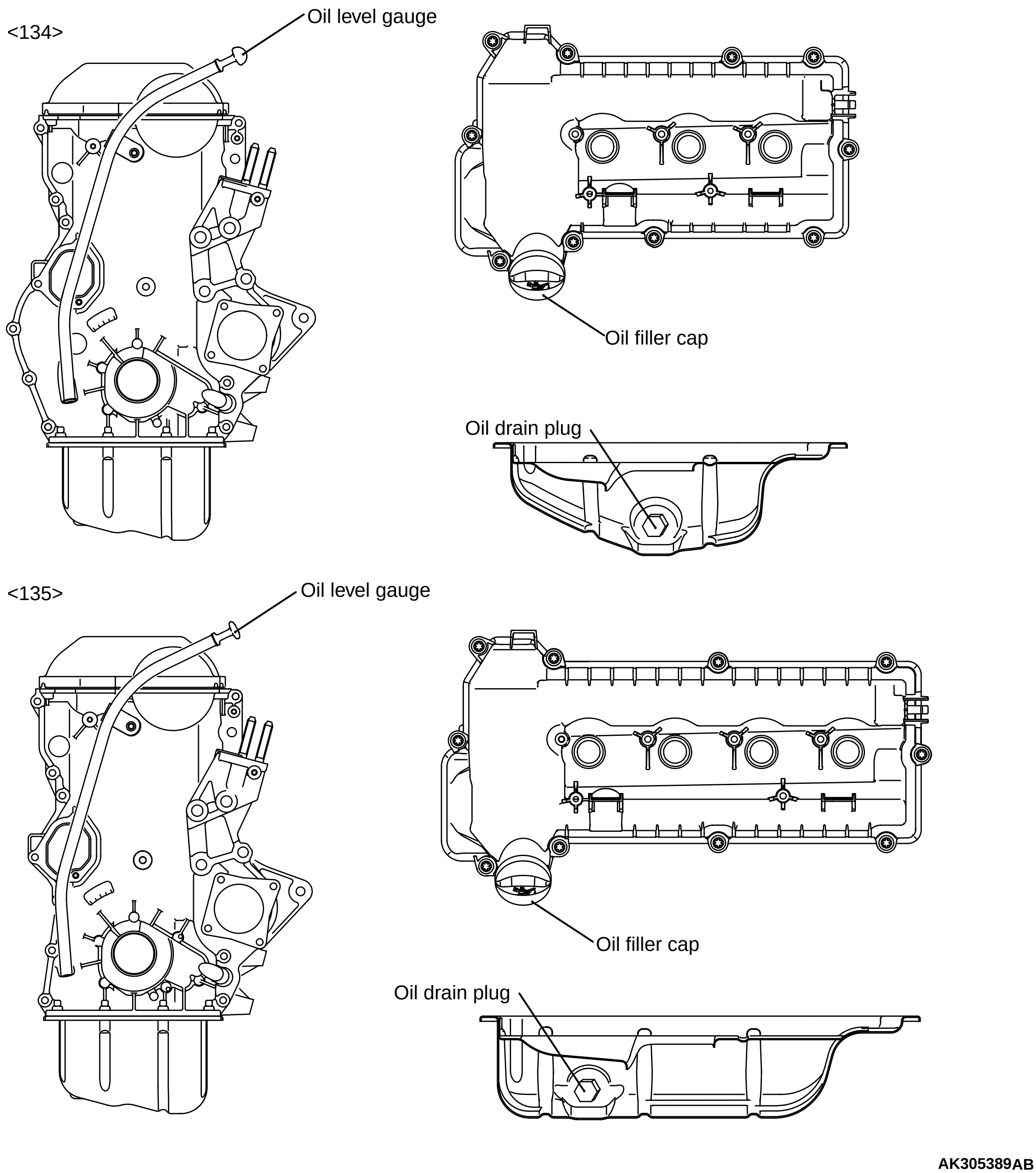


AK305283AB

The oil pan, located below the engine, is made of sheet metal.

OIL LEVEL GAUGE, OIL FILLER CAP, OIL DRAIN PLUG

M2120007000016



The oil level gauge, oil filler cap, and oil drain plug are all located in the front of the engine for excellent serviceability.